Towards a Standard for CME Modeling and Forecasting

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Accurately modeling the propagation of coronal mass ejections (CMEs) in the heliosphere and forecasting their arrival at Earth is critical for space weather prediction. However, the lack of standardized procedures leads to inconsistencies in model performance assessment and forecast accuracy. The International Organization for Standardization (ISO) develops globally recognized standards to unify methodologies across scientific and engineering disciplines. This presentation introduces a draft outline of an ISO standard for CME modeling and forecasting, emphasizing the standardization of validation criteria, data formats, and model performance assessment. The development of universal guidelines will enhance the transparency of data processing, simplify the evaluation of forecasting system performance, facilitate international collaboration, and ultimately improve models for more accurate space weather predictions.